

B 1 3 11
1. (Twice amended) A ball comprising an outer skin, the outer skin being formed from a plurality of cut pieces and including a first layer which includes a syntactic material.

B 2 24
24. (Amended) A ball according to claim 1, wherein the plurality of cut pieces are joined together.

25. (Amended) A ball according to claim 24, wherein the plurality of cut pieces are sewn together.

REMARKS

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter; claims 1-12 and 24-27 are rejected under 35 U.S.C. §112, first paragraph; claims 1, 3, 7, and 9 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,802,671 to Gentiluomo ("Gentiluomo"); claims 1-4, 6, 7, and 28 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,154,789 to Delacoste ("Delacoste"); claims 2, 4-6, and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gentiluomo in view of U.S. Patent No. 5,516,107 to Okumoto et al. ("Okumoto"); claim 8 is rejected under 35 U.S.C. §103(a) as being unpatentable over Gentiluomo in view of U.S. Patent No. 5,091,265 to Kennedy et al. ("Kennedy"); claims 24 and 25 are rejected under 35 U.S.C. §102(b) as being anticipated by Gentiluomo, or alternatively under 35 U.S.C. §103(a) as being unpatentable over Gentiluomo; claims 26 and 27 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gentiluomo; claims 1-4, 6, 7, 9-12, and 24-28 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,660,831 to Kralik ("Kralik") in view of Delacoste; claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kralik in view of Delacoste and Okumoto; and claim

8 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kralik in view of Delacoste and Kennedy.

Applicant hereby amends independent claim 1 and dependent claims 24 and 25. Claim 1 has been amended to recite an outer skin formed from a plurality of cut pieces. Claims 24 and 25 have been amended to make the language consistent with independent claim 1, from which claims 24 and 25 depend, either directly or indirectly. No new matter has been entered thereby. Support for the amendments can be found at least at page 10, lines 1-3.

Claims 1-12 and 24-28 are currently pending and presented for reconsideration. In view of the above amendment and following remarks, reconsideration and withdrawal of all grounds of objection and rejection are respectfully requested.

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. Specifically, the specification is not seen as setting forth that the outer layer comprises a sheet. Applicant has deleted the reference to a "sheet" from the claims, thereby rendering the objection moot. Accordingly, Applicant respectfully requests that this objection be reconsidered and withdrawn.

2. Claims 1-12 and 24-27 are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) had possession of the claimed invention. Applicant has deleted the reference to a "sheet" from the claims, thereby rendering the rejection moot. Accordingly, Applicant respectfully requests that this rejection be reconsidered and withdrawn.

3. Claims 1, 3, 7, and 9 are rejected under 35 U.S.C. §102(b) as being anticipated by Gentiluomo. Applicant respectfully traverses this rejection with respect to the claims as amended.

Gentiluomo describes a bowling ball with a high-density inner core 1 and an outer core 2. Encapsulating the outer core 2 is a rigid low-density syntactic foam cover 3. Gentiluomo describes the manufacture of the ball as being achieved by means disclosed in pending patent application Serial No. 628,158, filed July 5, 1984, now abandoned, and also by means well-known in the art. See column 2, lines 58-61, of Gentiluomo.

Independent claim 1 has been amended to claim a ball with an outer skin that is “*formed from a plurality of cut pieces.*” As disclosed in the specification, the outer skin is cut in order to produce the individual ball elements, *i.e.*, pieces, which are then sewn together to produce the finished ball. See page 10, lines 1-3.

Gentiluomo does not teach any type of ball wherein an outer skin is “*formed from a plurality of cut pieces.*” Rather, Gentiluomo describes the cover 3, which includes the syntactic material, as being formed from a liquid casting resin poured to fill the mold cavity around the inner core 1 and top weight mass 4 or the outer core 2. Gentiluomo is silent with respect to any other method of forming the outer cover, and therefore, fails to disclose an outer skin “*formed from a plurality of cut pieces.*” Accordingly, Applicant respectfully submits that independent claim 1, as amended, is patentable over Gentiluomo. Because claims 3, 7, and 9 depend, either directly or indirectly, from amended independent claim 1, Applicant respectfully submits that these claims are patentable as well.

Reconsideration and withdrawal of the rejection of claims 1, 3, 7, and 9 under 35 U.S.C. §102(b) as being anticipated by Gentiluomo are respectfully requested.

4. Claims 1-4, 6, 7, and 28 are rejected under 35 U.S.C. §102(b) as being anticipated by Delacoste. Applicant respectfully traverses this rejection with respect to the claims as amended.

Briefly, Delacoste describes a cast aluminum ball mold and a method of making a thermoplastic ball in the mold. Specifically, Delacoste describes manufacturing a ball by introducing a thermoplastic material into two semi-spherical mold halves, thereby producing a single molded piece ball. See column 6, lines 23-36, of Delacoste.

Like Gentiluomo, Delacoste also fails to anticipate amended claim 1, because Delacoste fails to disclose any type of ball wherein an outer skin is “*formed from a plurality of cut pieces.*” See, for example, FIGS. 1 and 2, and column 6, line 64, to column 7, line 56. In addition, Delacoste is silent with respect to any other method of forming an outer layer. Applicant respectfully submits that amended independent claim 1 is patentable over Delacoste. Furthermore, because claims 2-4, 6, and 7 depend, either directly or indirectly, from claim 1, Applicant respectfully submits that these claims are patentable as well.

Delacoste also fails to anticipate independent claim 28, which recites, in part, a ball comprising an “*inflatable bladder core and an outer skin.*” Delacoste discloses providing for inflating valve 8 in the mold, but fails to disclose a ball having an “*inflatable bladder core and an outer skin.*” See column 7, lines 55-56. The ball disclosed by Delacoste has a single outer skin manufactured from a thermoplastic material. The skin is inflatable and does not include a bladder core. See FIG. 1. In fact, there is nothing in Delacoste to even suggest the desirability of

adding a separate “*inflatable bladder core*” to the outer skin of the disclosed ball. As such, Applicant respectfully submits that claim 28 is patentable over Delacoste.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-4, 6, 7, and 28 under 35 U.S.C. §102(b) as being anticipated by Delacoste are respectfully requested.

5. Claims 2, 4-6, and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gentiluomo in view of Okumoto. Applicant respectfully traverses this rejection.

Okumoto describes a method of producing a wood type golf club head that includes integrally molding and curing an outer shell portion 2 of the head main body 1 having a hollow portion 6 therein. See column 2, lines 6-15, of Okumoto. Further, weights W are placed in recesses 8 formed on at least one of the toe, back, and heel sides of the outer shell portion 2. The hollow portion 6 is packed with a foamable material 7, keeping the weights W in place.

As a threshold matter, claims 2, 4-6, and 11 all depend directly or indirectly from amended independent claim 1. As discussed above in paragraph 3, Gentiluomo fails to disclose a ball comprising an outer skin “*formed from a plurality of cut pieces,*” and the disclosure of Okumoto fails to cure this deficiency of Gentiluomo with respect to claim 1. Neither Gentiluomo nor Okumoto, alone or in proper combination, provide the teaching, suggestion, or motivation for one skilled in the art to make a ball utilizing an outer skin “*formed from a plurality of cut pieces,*” as claimed in independent claim 1. Therefore, claims 2, 4-6, and 11, which depend either directly or indirectly from claim 1, are patentable over Gentiluomo in view of Okumoto.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 2, 4-6, and 11 under 35 U.S.C. §103(a) as unpatentable over Gentiluomo in view of Okumoto.

6. Claim 8 is rejected under 35 U.S.C. §103(a) as being unpatentable over Gentiluomo in view of Kennedy. Applicant respectfully traverses this rejection.

Kennedy describes a coating composition for game balls. The coating includes a film forming binder comprised of a linear saturated polyester polyol resin having an average equivalent weight of about 900 to about 1500, combined with an aliphatic polyisocyanate resin cross-linking agent, a fluorescent pigment which is present in the ratio of about 85-90 parts by weight per 100 parts by weight of the film forming binder (and/or about 80 to about 110 parts by weight per 100 parts by weight of the polyester polyol resin), at least one compatible solvent, a texturizing agent and, in some instances, a flow control or leveling agent. See column 2, lines 37-52, of Kennedy.

Claim 8 depends from claim 7, which depends from amended independent claim 1. Applicant respectfully submits that the disclosure of Kennedy fails to cure the deficiencies of Gentiluomo with respect to amended independent claim 1, as described hereinabove in paragraph 3. For example, Kennedy does not teach, suggest, or motivate one skilled in the art to make a ball utilizing an outer skin "*formed from a plurality of cut pieces.*" Because amended independent claim 1 is patentable, Applicant submits that claim 8, which depends indirectly from claim 1, is also patentable.

Accordingly, reconsideration and withdrawal of the rejection of claim 8 under 35 U.S.C. §103(a) as being unpatentable over Gentiluomo in view of Kennedy are respectfully requested.

7. Claims 24 and 25 are rejected under 35 U.S.C. §102(b) as anticipated by Gentiluomo, or alternatively under 35 U.S.C. §103(a) as being unpatentable over Gentiluomo. Applicant respectfully traverses this rejection with respect to the claims as amended.

Claims 24 and 25 depend, either directly or indirectly, from amended independent claim 1. Because claim 1 is patentable over Gentiluomo, as discussed above in paragraph 3, Applicant submits that these dependent claims are patentable as well. Specifically, Gentiluomo fails to disclose a ball comprising an outer skin “*formed from a plurality of cut pieces.*” There is also no suggestion or motivation in Gentiluomo to make a ball comprising an outer skin “*formed from a plurality of cut pieces.*”

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 24 and 25 under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) as unpatentable over Gentiluomo.

8. Claims 26 and 27 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gentiluomo. Applicant respectfully traverses this rejection.

Claims 26 and 27 depend indirectly from amended independent claim 1. Because claim 1 is patentable over Gentiluomo, as discussed above in paragraph 3, Applicant submits that these dependent claims are patentable as well. Again, Gentiluomo fails to suggest or motivate a person to make a ball comprising an outer skin “*formed from a plurality of cut pieces.*”

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 26 and 27 under 35 U.S.C. §103(a) as unpatentable over Gentiluomo.

9. Claims 1-4, 6, 7, 9-12, and 24-28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kralik in view of Delacoste. Applicant respectfully traverses this rejection with respect to the claims as amended.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). MPEP § 706.02(j).

Furthermore, the “prior art reference must be considered in its entirety, i.e., as a whole, *including portions that would lead away from the claimed invention.*” *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, (Fed. Cir. 1983)(emphasis added). MPEP § 2141.02. In addition, “*if [the] proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.*” *In re Gordon*, 733 F.2d 900, (Fed. Cir. 1984)(emphasis added) MPEP § 2143.01.

Kralik discloses an inflatable padded ball wherein a foam padding 16 is placed between an outer cover 14 and an inner liner 18 encompassing an inflatable bladder 12. See column 2, lines 36-50, of Kralik. The foam padding 16 is used to make the outer surface of the ball softer and more yielding to the touch. In particular, Kralik teaches that the padding is made of a foam,

such as neoprene, which allows for compression, i.e., deformation, of the ball, thereby improving grippability of the ball. See column 1, lines 32-36 and lines 58-60, column 2, lines 49-50, column 3, lines 42-47, and column 5, lines 32-33 and lines 40-53. Kralik clearly discloses a ball with compressible foam padding 16 for the purpose of promoting deformation of the ball. Kralik does not teach, suggest, or motivate one skilled in the art to make a ball utilizing an *outer skin including a first layer which includes a syntactic material* as claimed in independent claims 1 and 28. Moreover, Kralik does not teach, suggest, or motivate one skilled in the art to use any syntactic material, as this would defeat the purpose of the invention of Kralik.

With respect to Delacoste, and as recognized in the Office Action at page 5, lines 16-18, Delacoste discloses throughout its specification using microspheres to reduce ball deformation. See, for example, column 2, lines 26-33, column 3, lines 45-52, and column 3, line 63, to column 4, line 5.

Applicant submits that it would be improper to combine the teachings of Kralik with the teachings of Delacoste. Kralik is directed to providing a ball with foam padding to promote deformation of the ball, thereby improving grippability of the ball. In distinct contrast to Kralik, Delacoste teaches using microspheres to reduce the deformation properties of the ball. It would not have been obvious for one of ordinary skill in the art to add the microspheres of Delacoste to the foam padding of Kralik, because to do so would render Kralik unsatisfactory for its intended purpose, i.e., improved grippability. Therefore, Applicant respectfully submits that the disclosures of Kralik and Delacoste would not have been combined by a person skilled in the art. Kralik and Delacoste lack the necessary motivation or suggestion to make the proposed

modification suggested in the Office Action, and therefore, independent claims 1 and 28 are not obvious in view of the conflicting teachings of Kralik and Delacoste.

In addition, Kralik discloses that the foam padding 16 is placed between an outer cover 14 and a liner 18. Applicant's claimed invention is a ball having an outer skin including a syntactic material. Even if the syntactic layer of Delacoste could be substituted for the foam padding of Kralik, one would not arrive at the claimed invention, because the syntactic material of the claimed invention is included in the outer skin, not between inner and outer layers.

For all of the foregoing reasons, Applicant respectfully submits that independent claims 1 and 28 are patentable over the combination of Kralik and Delacoste. Furthermore, claims 2-4, 6, 7, 9-12, and 24-27, which depend directly or indirectly from claim 1, are patentable as well. Reconsideration and withdrawal of the rejection of claims 1-4, 6, 7, 9-12, and 24-28 under 35 U.S.C. §103(a) as being obvious over Kralik in view of Delacoste are respectfully requested.

10. Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kralik in view of Delacoste and Okumoto. Applicant respectfully traverses this rejection.

Claim 5 depends indirectly from amended independent claim 1. Because claim 1 is patentable over the combination of Kralik and Delacoste, as discussed above in paragraph 9, and Okumoto fails to cure the deficiencies of Kralik and Delacoste with respect to claim 1, Applicant submits that claim 5 is patentable as well.

Accordingly, reconsideration and withdrawal of the rejection of claim 5 under 35 U.S.C. §103(a) as being obvious over Kralik in view of Delacoste and Okumoto are respectfully requested.

11. Claim 8 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kralik in view of Delacoste and Kennedy. Applicant respectfully traverses this rejection.

Claim 8 depends indirectly from amended independent claim 1. Because claim 1 is patentable over the combination of Kralik and Delacoste, as discussed above in paragraph 9, and Kennedy fails to cure the deficiencies of Kralik and Delacoste with respect to claim 1, Applicant submits that claim 8 is patentable as well.

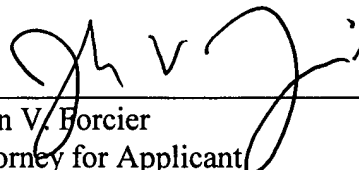
Accordingly, reconsideration and withdrawal of the rejection of claim 8 under 35 U.S.C. §103(a) as being obvious over Kralik in view of Delacoste and Kennedy are respectfully requested.

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration, withdrawal of all grounds of objection and rejection, and allowance of claims 1-12 and 24-28 in due course. The Examiner is invited to contact Applicant's undersigned representative by telephone at the number listed below to discuss any outstanding issues.

Respectfully submitted,

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MARKED UP VERSION OF CLAIMS SHOWING AMENDMENTS

1. (Twice amended) A ball comprising an outer skin, the outer skin being formed from ~~as~~ a plurality of cut pieces and sheet including a first layer which includes a syntactic material.
24. (Amended) A ball according to claim 1, wherein the ~~sheet is cut into individual elements~~ which plurality of cut pieces are joined together.
25. (Amended) A ball according to claim 24, wherein the ~~individual elements~~ plurality of cut pieces are sewn together.